

**AMENDMENTS TO THE SPECIFICATION:**

Please amend the paragraph extending from page 8, line 26 to page 10, line 4, as follows:

The deformation of the central surface 33 causes a new, advantageous optical effect. That effect is explained on the basis of the diffraction characteristics at intersection points A, B, C of the surface normal 21 and normals 21', 21" to the central surface 33, for example along the line 36. Refraction of the incident light 11, the reflected light 22 and the diffracted light beams 34 at the interfaces of the layer composite 1 is not shown for the sake of simplicity in Figure 5 and is not taken into account in the calculations hereinafter. At each intersection point A, B, C the inclination  $\gamma$  is determined by the gradient 38. The normals 21' and 21", the grating vector of the diffraction grating 32 (Figure 4) and a viewing direction 39 of the observer 35 are disposed in the diffraction plane 20. The angle of incidence  $\alpha$  (Figure 3) which is included by the normals 21, 21', 21" shown in broken line and the white light 11 incident in parallel relationship changes in accordance with the angle of inclination  $\gamma$ . There is also a change therewith in the wavelength  $\lambda$  of the diffracted light beams 34 which are deflected in a predetermined viewing direction 39 to the observer 35. If the normal 21' is inclined away from the viewer 35, the wavelength  $\lambda$  of the diffracted light beams 34 is greater than if the normal 21" is inclined towards the observer 35. In the example shown for illustration purposes, from the point of view of the observer 35, the light beams 34

which are diffracted in the region of the intersection point A are of a red color ( $\lambda = 700 \text{ nm}$ ). The light beams 34 diffracted in the region of the intersection point B are of a yellow-green color ( $\lambda = 550 \text{ nm}$ ) and the light beams 34 diffracted in the region of the intersection point C are of a blue color ( $\lambda = 400 \text{ nm}$ ). As in the illustrated example the inclination  $\gamma$  changes continuously over the curvature of the central surface 33, the entire visible spectrum is visible for the observer 35 along the line 36 on the surface portion 13, 14, 15, the color bands of the spectrum extending on the surface portion 13, 14, 15 in perpendicular relationship to the line 36. So that the color bands of the spectrum can be perceived by the observer 35 at a 30 cm distance, at least 2 mm length or more is to be adopted for the distance between the intersection points A and C. Outside the visible spectrum, the surface of the surface portion 13, 14, 15 is a gray of low light intensity. When the layer composite 1 is tilted about the tilt axis 41 perpendicularly to the plane of the drawing in Figure [3], the angle of incidence  $\alpha$  changes. The visible ~~colour~~ color bands of the spectra are displaced in the region of the superimposition function  $M(x, y)$  continuously along the line 36. In the event of a tilting movement, for example in the clockwise direction about the tilt axis 41 of the layer composite 1, the color of the diffracted light beam 34 at the intersection point A changes to yellow-green, the color of the diffracted light beam 34 at the intersection point B changes to blue and the color

of the diffracted light beam 34 at the intersection point C changes to violet. The variation in the colors of the diffracted light 34 is perceived by the observer 35 as motion of the color bands continuously over the surface portion 13, 14, 15.

Please further amend the paragraphs extending between page 10, line 22 and page 11, line 20, as follows:

Referring to Figure 6a, the displacement of the strip can be more easily perceived by the observer 35 (Figure 5) if there is a reference on the security feature 16.

Serving as the reference are identification marks 37 (Figure 2) arranged on the surface portion 13, 14, 15, for example, on the central surface portion 14, and/or a predetermined delimitation shape for the surface portion 13, 14, 15.

Advantageously, the reference establishes a predetermined viewing condition which can be so adjusted by means of tilting movement of the layer composite 1 (Figure 1) that the strip 40 is positioned in predetermined relationship with respect to the reference. In the region of the identification marks 37 the optically effective structure 9 (Figure 1) of the interface 8 (Figure 1) is advantageously in the form of an optically effective structure 9, a diffractive structure, a mirror surface or a light-scattering relief structure which is shaped upon replication of the surface pattern 12 in register relationship with the surface portions 13, 14, 15. Light-absorbent printing on the security feature ~~13~~ 15 can however also be used as the

reference for the movement of the strip 40 or the identification mark 37 is produced by means of the structured reflection layer.

In a further embodiment of the security feature 16 as shown in Figures 6 the adjacent surface portions 13 and 15 which adjoin the central surface portion 14 on both sides serve as a mutual reference. The adjacent surface portions 13 and 15 both have a diffraction structure  $S^*(x, y)$ . In contrast to the diffraction structure  ~~$S^*(x, y)$~~   $S(x, y)$  the diffraction structure  $S^*(x, y)$  is the difference R-M of the relief function  $R(x, y)$  and the superimposition function  $M(x, y)$ , that is to say  $S^*(x, y) = R(x, y) - M(x, y)$ . The color bands produced by the diffraction structure  $S^*(x, y)$  are of a reversed color configuration with respect to the color bands of the diffraction structure  $S(x, y)$ , as is indicated in the drawing of Figure 6a by means of a bold longitudinal edging for the strip 40. For good visibility of the optical effect without aids, the security feature 16 is of a dimension of at least 5 mm and preferably more than 10 mm along the co-ordinate axis y or the line 36. The dimensions along the co-ordinate axis x are more than 0.25 mm, but preferably at least 1 mm.

Please further amend the paragraphs extending between page 19, line 32 and page 11, line 20, as follows:

In Figure 12a the security element 16 is in the x-y-plane defined by the co-ordinate **axes** axis x and y, wherein the viewing direction 39 (Figure 5) forms a

right angle with the co-ordinate axis  $x$ . In the case of perpendicularly incident white light 11 (Figure 1) the partial surfaces 47 are illuminated in the region of the minima of the superimposition function  $M(x, y)$ . As those partial surfaces 47, in both diffraction structures  $S(x, y)$ ,  $S^{**}(x, y)$ , involve the same relief profile  $R(x, y)$  and the same inclination  $\gamma \approx 0^\circ$ , the light beams 34 (Figure 5) which are diffracted into the viewing direction 39 at the two surface portions 13, ~~14~~ ~~15~~ originate from the same range of the visible spectrum, for example green, so ~~that the~~ that the color contrast on the security feature 16 disappears between the first surface portion 14 and the second surface portion 13. When the security feature 16 is tilted about the tilt axis 41 the color contrast becomes clearer with an increasing tilt angle, as is shown in Figure 12b. When the security feature is tilted towards the left the color of the first surface portion 14 is displaced in the direction of red as the partial surfaces 47 (Figure 11) with the relief profiles  $R(x, y)$  in respect of which the spatial frequency  $f$  is less than  $f_M$  become effective. The color of the second surface portion 13 is displaced in the direction of blue as the partial surfaces 47 in respect of which the spatial frequency  $f$  of the relief profile  $R(x, y)$  is greater than  $f_M$  become effective. In Figure 12c the security feature 16 is tilted from the position shown in Figure 12a towards the right about the tilt axis 41. The color contrast also appears markedly upon tilting towards the right, but with interchanged colors. The color of the first surface portion 14 is

displaced in the direction of blue as the partial surfaces 47 in respect of which the spatial frequency  $f$  of the relief profile  $R(x, y)$  is greater than the value  $f_M$  become effective while the color of the second surface portion 13 is displaced in the direction of red as the partial surfaces 47 (Figure 11) in respect of which the spatial frequency  $f$  of the relief profile  $R(x, y)$  of the diffraction structure  $S^{**}(x, y)$  decreases with respect to the value  $f_M$  become effective.